

# NUCLEAR DIVISION NEWS

A Newspaper for Employees of the Nuclear Division, Union Carbide Corporation

Vol. 3 — No. 10

6-19350 Thursday, July 13



**SIGN THREE-YEAR CONTRACT** — Union Carbide officials and leaders in the Atomic Trades and Labor Council sign a three-year contract between the company and hourly workers at Y-12 and Oak Ridge National Laboratory. At left, signing for members of



ATLC at ORNL are Norman Beeler and Floyd Culler, and at right signing for ATLC at Y-12 are B.W. Hensley and Jerry George. The new contract expires June 21, 1975, with provisions for wage reopeners in both 1973 and 1974.

## QUESTION BOX

If you have a question on company benefits, policies, etc., just drop it in the mail to the Editor, Nuclear Division News. (Or telephone it in to your plant news representative . . . see page two.) You may or may not sign your name; it will not be used in the News.

Questions are referred to the proper authority for as accurate an answer as possible. Each query is given serious consideration for publication.

Answers may be given to employees personally if they so desire.

**QUESTION:** Why has the Affirmative Action plan created so much attention, and nothing has been brought out about man being discriminated against over women? Two samples: Company -- a woman in the retirement plant can retire at 59 with the same benefits as a man at 64. Social Security -- Refer to "Your New Social Security and Medicare Fact Sheet amended March 1971." Men and women with maximum creditable earnings . . . Retiring 1972 -- a man 65 can retire with \$216.10/mo. while a woman can retire with \$224.70/mo. Why the 3.98% more for women?

**ANSWER:** Retirees from Carbide receive benefits from two primary sources: (1) Company-sponsored Pension Plan (Non-Contributory) and Retirement Plan (Contributory); and (2) Social Security benefits.

There have never been any differences in the methods of calculating benefits from the Pension Plan for men or for women since the program was established within the Nuclear Division. The Retirement Plan was amended in 1957 to provide equal benefits for men and women hired after that date.

Differences do exist in the benefits paid to men and women under the Social Security Plan, and your quotation from the fact sheet published by the Bureau of National Affairs cites this difference in the original Social Security Act as passed

by Congress. The Social Security Plan can be changed only through Congressional action.

If you have further questions, please feel free to talk to the people in the Benefit Plans Office in your installation.

**QUESTION:** How does an employee go about transferring into another division of Union Carbide? Are there positions open with Carbide International?

**ANSWER:** There are a limited number of transfers between divisions of Union Carbide. Such transfers generally originate when one division is seeking to fill a job calling for special qualifications and/or experience for which they have no qualified applicant in their own division. With these limitations in mind, an employee who is interested may inquire through his supervisor about the chances for such a transfer. Presently there are no openings in the International Company.

(Continued to Page 8)

## Three year contract signed by UCC and bargaining units from ORNL---Y-12

A new three-year contract between the Atomic Trades and Labor Council and Union Carbide Corporation has been ratified by the union membership. The contract covers the approximately 4300 hourly employees at the Oak Ridge Y-12 Plant and the Oak Ridge National Laboratory.

Among the major items included in the contract are a wage increase, hospital and surgical plan benefits, non-occupational make-up pay, improved arbitration procedure and educational leaves of absence.

### 6 percent increase

The new contract calls for a 6 per cent across the board pay increase. Members of the crafts received an additional 28 cents an hour, bringing the average craft rate to \$4.90. The average operator rate was increased 26 cents to \$4.53 an hour while the average rate for other workers was increased 20 cents to \$3.49 an hour.

The contract calls for improved dependency coverage as part of the hospital and surgical plan benefits. Specifically, the dependency coverage is raised from age 19 to age 23 for fully dependent family members and provides for coverage for fully disabled family members who are disabled prior to age 23.

### Hospital plan improved

Effective August 1, the hospital and surgical plan will include payment for semi-private rooms and will increase the payments for hospital visits by a doctor from \$4 to \$5 a visit, beginning with the fifth day.

Also effective August 1, the maternity payments will be increased from \$90 to \$125.

Other aspects of the new contract are:

Non-occupational make-up pay -- If an employee is hospitalized during the first three days of a certified, non-occupational disability, any remaining portion of the three-day waiting period will be waived and the employee will be paid in accordance with the non-occupational disability pay provision of the contract.

Improved Arbitration Procedure -- The company and the union will set up a list of 14 approved arbitrators from which arbitrators for specific cases will be selected. Included in the effort to speed up arbitration is an agreement that the arbitrator's decision will be issued within 60 days of the hearing.

Educational leaves of absence -- The company will consider applications for leaves of absence for educational purposes. Granting of such leave is subject to company approval.

The contract expires on June 21, 1975.

## 72's toll enrichment sum at \$30 million thus far

Approximately \$13 million in toll enrichment sales were recorded at the Oak Ridge Gaseous Diffusion Plant during the second quarter of 1972. This brings sales for the year to approximately \$30 million.

During the second quarter of the year more than 224,000 pounds of enriched uranium was shipped for use in nuclear reactors in West Germany, California, Florida and Illinois.

Under the toll enrichment program, privately-licensed owners bring their uranium to a gaseous diffusion plant for enriching on a toll basis. Customers are charged for the services required to separate from natural uranium the desired percentage of the uranium-235 isotope, usually two and three percent.

## NUCLEAR DIVISION SAFETY SCOREBOARD

Time worked without a lost-time accident through July 6:

ORGDP .....	14 Days	173,000 Man-Hours
ORNL .....	6 Days	77,352 Man-Hours
Paducah .....	106 Days	655,000 Man-Hours
Y-12 .....	261 Days	9,675,000 Man-Hours

**Safety is everyone's concern!**



## D. O. DeHart, Maintenance, dies at Knoxville home

Dennis O. DeHart, Buildings, Grounds and Maintenance Shops, died at his Knoxville home June 26.

A native of Bryson City, N.C., Mr.



Mr. DeHart

DeHart came to Y-12 early in 1944. He had worked with the Tennessee Valley Authority, Southern Railway Company, and the Allen Construction Company before coming with Union Carbide. He lived at 1617 Wilder Place, Knoxville.

His only survivor is a sister, Mrs. Nina D. Crews, Bryson City.

Funeral services and burial were held at the North Carolina city.

## Attack fatal to J.A. Cole

James A. Cole, Y-12 machinist in Tool Grinding, died June 22, from a massive heart attack.

A native of Alabama, Mr. Cole was



Mr. Cole

employed for Continental Gin Company, Birmingham, before coming with Union Carbide in 1959. He was in the U.S. Army during World War II.

Survivors include his wife Mrs. Seleanor Cole, 270 Highland Avenue, Oak

Ridge; a daughter, Lilia Ruth Hill; two sons, James Cole and Ralph Cole; four brothers, seven sisters, and eight grandchildren.

Sons, one sister and one grandson.

Funeral services were held at Red Hill Baptist Church, and burial followed in the church cemetery.

### INCOME TAX DEDUCTIONS

"Finance charge" levied by retail store upon unpaid balance of customer who does not pay his full balance within 30 days is deductible as interest under Internal Revenue Code Section 163 (a).

### NUCLEAR DIVISION NEWS



Published Every 3 Weeks For

The Employees Of

UNION CARBIDE CORPORATION

NUCLEAR DIVISION

James A. Young, Editor, Y-12

Ext. .... 3-7100

Martha Goolsby, Assoc. Editor, ORNL

Ext. .... 3-6421

Chris Cawood, Paducah

Bell .... 369

Doug Carter, ORGDP

Ext. .... 3-3017

—Member—

APPALACHIAN INDUSTRIAL

EDITORS ASSOCIATION

INTERNATIONAL ASSOCIATION OF

BUSINESS COMMUNICATORS

OFFICE

Office

Post Office Box Y

Oak Ridge, Tenn. 37830

## 'One man's bread...another man's hobby'

"I owe my soul to the company store." R.R. "Tip" Tippy, Finance and Materials Division at ORGDP, not only can explain this phrase, he can show you what it means. He collects scrip, a medium of exchange used by coal mining companies, and to a lesser extent by lumber and railroad companies to extend credit to their employees between paydays. And he has one of the four largest collections in the U.S. with pieces from over 1000 companies in 18 states.

Tippy's knowledge of mining and its people dates back to his boyhood. He was born and reared in the coal mining region of southern Illinois and returned to that area when he finished college to work for the Peabody Coal Company in Illinois and later in Harlan County, Ky., before coming to Union Carbide in 1944. Then, about 12 years ago he decided to start collecting the scrip.

### Currency substitute

The use of scrip grew up in the late 1800s and continued at a few places as late as the 1960s. Companies began issuing scrip to employees for several different reasons. Because of the remoteness of many companies, U.S. coin and currency were often not in good supply. Also many employees had nowhere to buy goods but the company-operated store. With these conditions the companies began to issue scrip, usually not as payroll, between paydays against the wages of the pay period. Consequently, many employees borrowed themselves into the red and truly owed all their efforts to the company store. Many companies took advantage of their employees by inflating prices at the company store as an added means of

22-1304

making money from the operation.

### Rare scrip

The coal company scrip represented many evils. It is suggested that company scrip made slaves out of miners, since they could not save real money, and since their pay was translated into real money at great discounts. It can safely be said that the mere fact of the existence of the scrip, and some of the attendant evils, was one of the basic factors leading to the creation of the United Mine Workers of America, the coal miner's union.

Most of the scrip was made by two companies and later the Osborne Register Company of Cincinnati absorbed the other. Most scrip presently available carries the ORCO trademark. The early scrip is much rarer and often carries no reference to who made the coin. Scrip came in denominations from 1 cent to \$20. Tippy says, to the collector, the most common denominations, those of 1 cent, 5 cent, 10 cent, 25 cent, 50 cent, and \$1, vary little in price. Only the rare scrip and unusual denominations vary much in value.

### No Government Sanction

The Treasury Department has always considered scrip as a thorn in its side and attempted in many ways to discourage the practice. However, not until the advent of the coin vending machine did the circulation of scrip become a critical problem. The one-cent piece of scrip usually issued by the coal companies fitted very conveniently into the dime slot on the coin vending machines. The five-cent piece often fit quarter slots and the twenty-five and fifty-cent pieces have been used to obtain silver coin. The problem was met in one respect by



**SCRIP SOURCEBOOK** — Compiled by a scrip collector, Gordon Dadrill, this manual holds over 20,000 listings encompassing a 55-year span. Tippy has drawn from this manual all those listed in Tennessee.

making the coins an odd size for coin vending machines.

When the pressure from state and federal government and from the UMW to get rid of the scrip, the companies used different means. Some melted it down, others embedded it in concrete and still others dumped it in lakes. Norris Lake, for example, was the scene of much dumping from local companies. Because many companies completely eliminated their supply, none of their scrip is available today to collectors. In fact, Tippy has never been able to find any scrip from his old employer, the Peabody Coal Company.

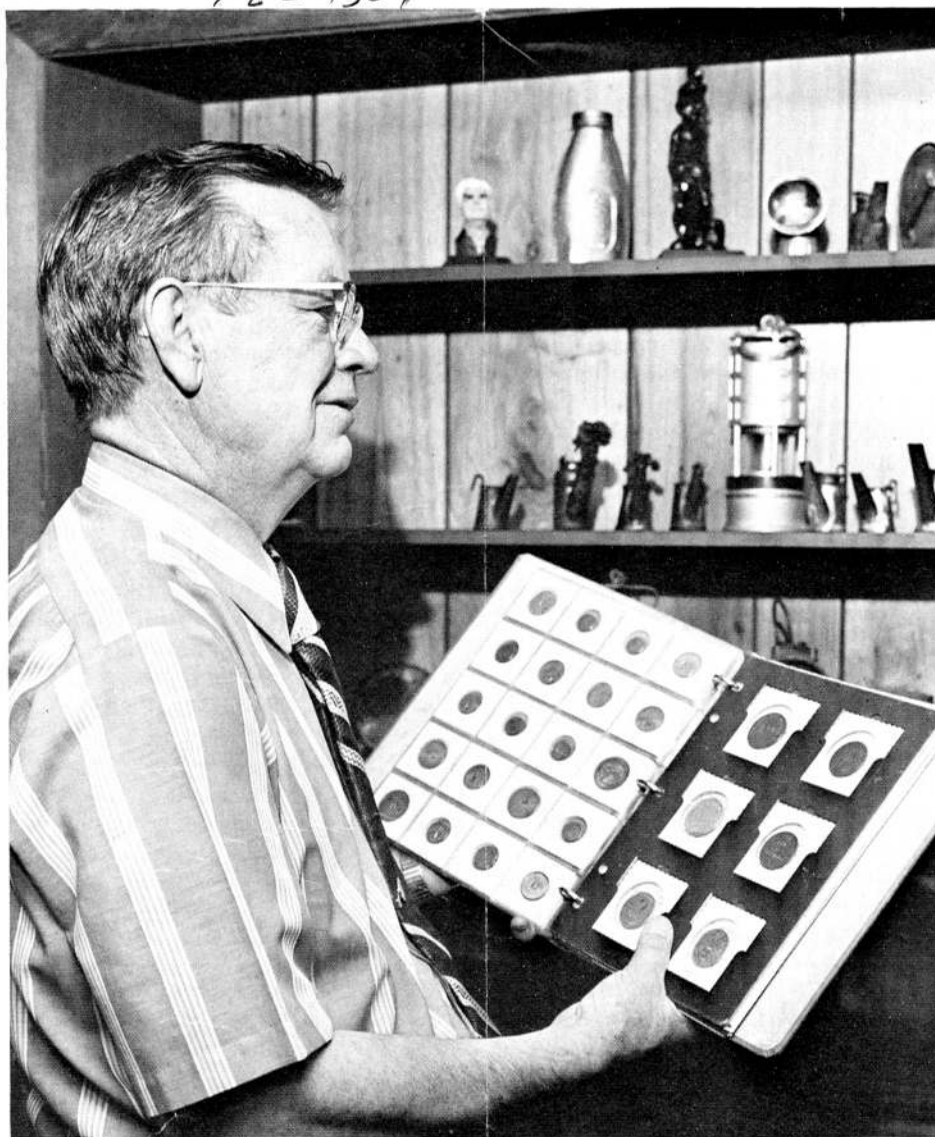
Tippy keeps his expensive collection of scrip in a bank vault, but he will be happy to show you some of his less rare collection and help you get started collecting scrip if you're interested. Over the years he has donated significant pieces to the scrip collections at the Smithsonian and Carnegie Museum and is willing to make donations to regional libraries. He also wants to buy and trade and seeks contacts on mining history and scrip. Asked how he built such a collection, he smiles. "The most frequent means is trading with other collectors. There are about 400 in the U.S. with most of them located in West Virginia." But Tippy has not build such a magnificent collection by trading along. "I also go to mining towns and knock on doors. I've met some really nice people that way. Some give me scrip, others bargain and others keep what they have. They are suspicious. After all, they think, why should someone want something which is 'worthless'."

## Scholarship in foods given Fair daughter

Jenny Lynn Fair, daughter of Leon Fair, ORNL's Personnel Division, has been awarded a scholarship by the General Foods Fund and selected as an alternate for the 1972-3 Institute of Food Technologists Freshman Scholarship Award.

She is a 1972 graduate of West High School in Knoxville where she was Co-Editor of the yearbook, a delegate to Volunteer Girls' State and secretary of the National Honor Society.

This fall she plans to enter The University of Tennessee College of Agriculture to major in food technology.



**AMERICANA PASSING BY** — "Tip" Tippy holds part of his collection of scrip, tokens issued by coal companies for spending at the company store. In the background is a collection of miners' lamps which he collects as an offshoot of his scrip collecting. The lamps, many which look like small pitchers and attach to the miners' helmet, held sunshine oil which was burned by the miner to provide his only light deep in a mine.





**A BIT CHILLY, BUT SUNNY!** — The Union Carbide sponsored swimming parties began recently for Paducah employees at Noble Park swimming pool. The newly remodeled pool is available to employees and their families from 9 a.m. Saturday mornings until noon through August 12.

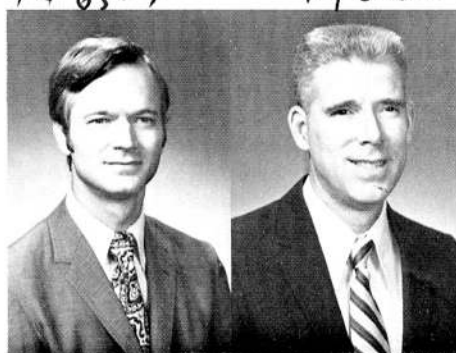
## AARP names Y-12's Burkett

Thomas A. Burkett, in Y-12's pre-retirement counseling program, has been named assistant to the state director for East Tennessee by the American Association of Retired Persons. Burkett will be responsible for liaison with AARP chapters in the area and will promote the programs and services of the 3.7 million-member national organization.

AARP, a nonprofit, nonpartisan organization, operating many income-stretching services and members, is the nation's largest organization dedicated to helping older persons.

Included among AARP services are recommended health, life and automobile insurance programs, a temporary employment service, a travel service created to mature needs, pharmacies offering prescription medicines and other health needs at reasonable prices, pre-retirement counseling programs and a continuing education program.

Burkett himself will retire in August.



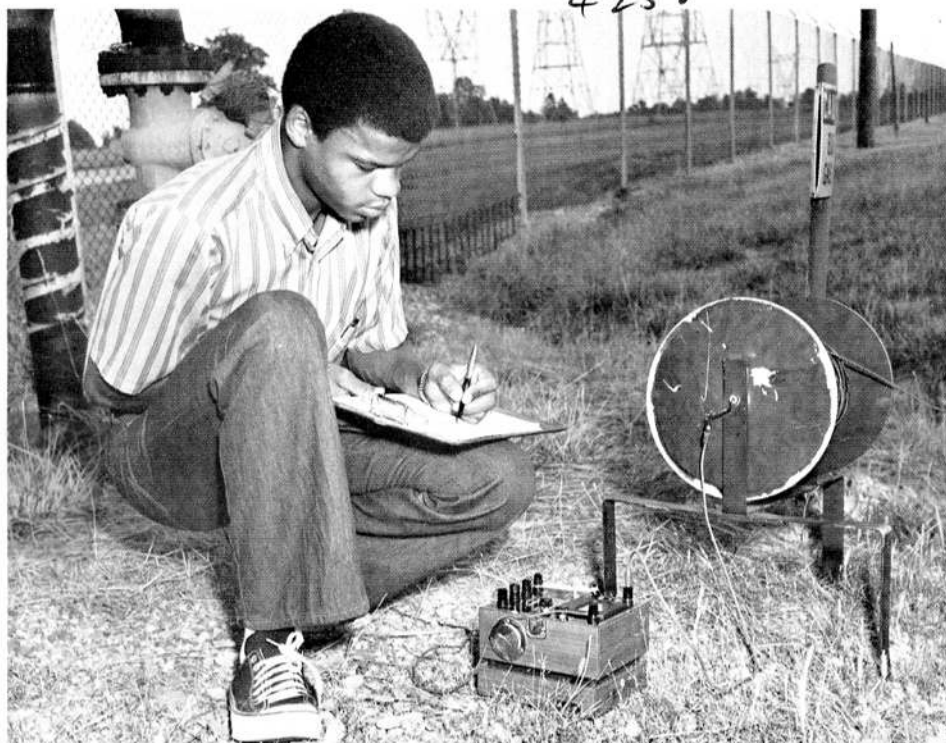
Ferguson

Postma

## Y-12 chemists' paper made at San Francisco meeting

Two Y-12 chemists have authored a scientific paper being presented at the Electron Probe Analysis Society of American conference in San Francisco, Cal., July 17-21.

The title of the report by Frederick W. Postma and James E. Ferguson is "NbC Microprobe Reference Material -- an Effort in Development."



**PROTECTIVE SURVEY** — Frank E. Batts, a pre-coop student at the Paducah Gaseous Diffusion Plant, makes a cathodic protection survey of the recirculating water lines as part of his work with the Power Engineering section of the Planning and Technical Support Division. Batts is a graduate of West Edge-Comb High School, Rocky Mount, N.C. He will enter North Carolina A and T University in the fall in pre-engineering.

## Gary Riser appointed manager of Nuclear Division auditing

Gary A. Riser has been appointed Manager of Auditing for the Nuclear Division. He succeeds John T. Reeve who has been given special responsibilities for auditing standards, procedures and reporting.

A native of White Plains, N.Y., Riser attended Norwich University in Vermont and in 1964 received a bachelor of science degree in industrial engineering from Pennsylvania State University.

He worked for a year with IBM in Mansfield, Ohio, following which he attended Ohio University and Ohio State University where he received his master's degree in business administration.

Riser joined the Nuclear Division in 1967 and was assigned to Atomic Energy Combined Operations Planning (AECOP) where he performed analytical studies. In 1971, he was transferred to the Auditing Division. He recently passed the examination for Certified Public Accountant.

Active in community affairs, Riser is treasurer of the Oak Ridge Arts Council.

He is married to the former Marcia Dickinson, also of White Plains. They and their son, Gregory, live at 422 Valparaiso Road, Oak Ridge.



Gary A. Riser

## ORNL Scientists heard on AEC's record album

The commentary of three Nuclear Division scientists is featured on a new education record album which is being distributed by the Atomic Energy Commission as a service to radio stations across the United States.

Featured on the record are James Liverman, ORNL associate director for Biomedical Environmental Sciences; Stanley I. Auerbach, director, Environmental Sciences Division; and Dr. Paul Nettesheim, medical pathologist, Biology Division. All three men are at Oak Ridge National Laboratory.

The record album, entitled "Let's Talk About the Atom and the Environment," is the third in a series produced to explain research and development in nuclear science and related fields.

In addition to the three speakers from ORNL, there is recorded commentary by seven other scientists and officials at other laboratories and universities.

## Patents granted

To Cressie E. Holcombe Jr., Y-12, for "Method for Rejuvenating Refractory Articles."

To Arthur P. Graas, ORNL, for "Pulsed Laser-Ignited Thermonuclear Reactor."

To Ed D. Hudson, ORNL, for "Magnetically Self-Shaping Septum for Beam Deflection."

To Joseph J. Asbury, Y-12, for "Method for Producing Porous Uranium."

To William C. Yee, ORNL, for "Chemical-Electro-Chemical Cycle for Desalination of Water."

## ORGDP's Petit presenting paper at Cleveland meet

George S. Petit, Chemical Analysis Department, Laboratory Division, ORGDP, presented a paper at the 59th annual technical conference of the American Electroplaters' Society. The paper, entitled "Coating of Oxide Dispersions in Nickel from Homogeneous Solution," was co-authored by Petit, along with Ralph R. Wright, Ted Kwasnoski and Charles W. Weber.

The paper describes two unusual methods for preparing metal matrices containing dispersed particles. Both approaches involve the formation of finely divided oxide particles while electroplating the metal matrix.

Co-deposition of urania (UO<sub>2</sub>) in nickel metal was achieved by electro-chemical reduction at a cathode surface. Thoria (ThO<sub>2</sub>), on the other hand, was co-deposited in nickel metal by controlled (non-reduction) precipitation at a cathode surface. By proper choice of reagents and plating conditions, this technique may be useful in preparing wear-resistant and/or lubricating surfaces, dispersion hardened metals or new material combinations for special applications.

The AES meeting was held in Cleveland, Ohio.



Petit



**WINS BRONZE STAR** — First Lt. Henry C. Ruth, son of L.R. Ruth, ORNL Instrumentation and Controls Division, has been awarded the bronze star for outstanding performance of duty in Vietnam. He serves with the F Troop, 2nd Squadron, 11th Armored Cavalry Regiment. He has also won the Vietnamese Cross of Gallantry, the Air Medal and the Combat Infantryman's Badge since arriving in Vietnam in 1971.





**BIRD IN HAND** — J.C. Potts, Y-12's Stores Department, shows off a baby wren that is prospering in his truck frame, despite the fact he travels more than a hundred miles a day from Y-12, to ORGDP, to ORNL and back again! The mama wren feeds the babies on his interim stops and before 8 a.m. and after 4:30. The babies could well be the most travelled wrens there are.

## Wren builds nest on commuting vehicle and feeds babies when driver returns!

J.C. Potts, Y-12 Stores Department, has an odd story to tell. And the oddest part about it is that it's true.

It seems the other day he heard these birds peeping up under the wheel casing

of his truck. On his lunch hour he kept vigil, and, sure enough, a wren flew up under there with food for baby birds!

The chirps increased in intensity and out she came, only to go searching for more food.

There's nothing particularly odd about wrens building in peculiar places, but there is when they build nests in a truck that commutes more than a hundred miles a day! The fact that the wren must have stayed on the nest all during the egg-setting session makes the story even more impossible.

Now that her babies have hatched, Mama Wren keeps busy feeding them . . . in between Potts' visits to ORGDP, ORNL and back to Y-12. She's always there, ready to feed the babies when the truck drives into its berth at Building 9720-8.

Potts did not relish the idea of 'wet-nursing' the baby birds through their nesting stages, but he did wish the wren had built her nest on steadier ground, "It makes an interesting lunchhour," he mused.

(Potts agreed to hold one of the babies for a photograph, but discourages handling the birds. So far, the mama wren hasn't objected too much.)

## Davis' granddaughter graduates with honors

High scholastic honors heralded Rubye Davis' graduation from LaFollette High School recently. She received a necklace from the Booster's Club, and gleaned several other honors for her high school record.

Now attending East Tennessee State University at Johnson City, Miss Davis plans to study journalism.

She is the granddaughter of Mrs. Rella Davis, Building Services Department, and has made her home for several years with her grandmother. They live at 315 North Seventh Street, LaFollette.



Miss Davis

## Damron-Stewart wedding held

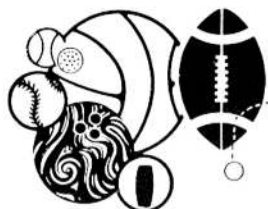
Margaret S. Damron and Ray N. Stewart were married June 1 in ceremonies at the home of the bridegroom's sister, Mrs. Betty Hill, Knoxville. The Rev. C.A. McKenzie, Sweetwater Association Missionary, officiated.

Mrs. Kenneth Parks was matron-of-honor and Mr. Larry Cate served as the bridegroom's best man.

Both Mr. and Mrs. Stewart are employed in Y-12's Finance and Materials Department. They are living in Kingston.



Mr. and Mrs. Ray N. Stewart



## SPORTS NOTES

### PADUCAH GOLF

Another hot mixed scramble got off the ground July 1 at the Calvert City Country Club. Marshall Jones came in with a flashy seven under par. Dave Barclay's score was six under. They were followed by Phil Brown, Jake Piercy, Rex Kluesner, Sid Lester and Charlie Maxwell. In eighth place was Arv Gorline.

### ALL CARBIDE

Softball standings through June 29

Team	W	L
All Stars	8	0
Snakes	8	1
Knights	6	1
Colts	8	2
Buccaneers	8	3
Red Barons	7	3
Computes	6	3
The Gang	6	3
Bio-Rejects	6	3
Hornets	7	4
Losers	7	4
Losers	4	3
Energetics	5	4
Supersonics	5	5
Centaurs	4	6
Ecology	4	7
Thermos	4	7
Bombers	2	5
Trojans	2	7
Raiders	2	7
Underdogs	2	8
Playmakers	2	8
Ridgerunners	1	6
A-Wingers	0	9

The Central Recreation Office has moved to Y-12, into Building 9711-5.

In order to better serve all Nuclear Division employees in the Oak Ridge area, the Recreation Office will be located in the Y-12 Plant. E.W. Whitfield, Recreation Coordinator; Emmett L. Moore, Recreation Supervisor; and Sue Martin, secretary, are located in the Cafeteria Building in Y-12.

All correspondence, inquiries, applications, etc., should be directed to Central Recreation, Building 9711-5, Stop 1, Y-12. The telephone number there is extension 3-7109. Recreation services to ORNL and ORGDP will continue as they have in the past.

### Y-12 GOLF

Jim Pugh took low score honors at the Whittle Springs Golf Tournament with a five-under-par score of 67. Charles Baxter turned in a one-under-par score. Division Two went to Merle Emory with a par score; Bill Everett tallied with an 81 to take Division Three.

John Baker and Everett Rogers took handicap lows with scores of 72 each.

### ORNL GOLF

Joe Luckett pulled a one-under-par score off the books at Wallace Hills to lead ORNL golfers in their June tournament. Doug Raymer scored a 74 to cop honors in the second division; Bert Cook and R. Pawel tied with J. Wiggins for honors in the third division, all with an 87.

Jim Bryson scored a 75, to win handicap honors in the Blount County greens race.

### ORGDP GOLF

Alvin Boatwright, ORGDP's answer to the pros, won again at Cedar Hills recently, carding a 74 score. Ed Ellis won division two honors with an 83; and J.E. Smith's 84 was low score in the third division.

E.L. Arnold's 77 took honors, handicap-wise.

## ORGDP folks plan picnic

Operations, Maintenance, Shift Operations and Security at Oak Ridge Gaseous Diffusion Plant are staging their annual summer picnic July 15 at the Clark Center Recreation Park.

Beginning at 1 p.m. Saturday, the picnic features all the normal picnic foods. Tickets (\$1.50 per adult, \$1 per child) are available from all division secretaries.

### 'OTHER POSSIBILITIES'

Aging is not simply decay; it is an accumulation of choices and consequences which, if there is any education at all, consists also of alternatives, an experience of strangeness, a sense of other possibilities, an appreciation of might-have-beens. -- John Leonard

## Tee-Off Time Application for July 22

(Check Appropriate Plant)

- ☐ ORNL - CEDAR HILLS, LENOIR CITY  
☐ Y - 12 SOUTHWEST POINT, KINGSTON  
☐ ORGDP - WHITTLE SPRINGS, KNOXVILLE

LEADER \_\_\_\_\_

Phone \_\_\_\_\_ Bldg. \_\_\_\_\_

Time Preferred \_\_\_\_\_

COMPLETE AND RETURN TO YOUR RECREATION OFFICE

Entries must be received prior to drawing on July 19, 2 P.M.

ORGDP—Building K1001—C-Wing—Room 136

ORNL/Y-12—Building 9711-5

Tee-off times for all tournaments will be drawn on Wednesdays prior to each Saturday's tournament. Other than at Gatlinburg, golfers are responsible for reserving their own carts by contacting the pro shop following drawing of tee-off times.





## Y-12 PLANT

RIDE — from Middlebrook Acres section, Knoxville, to Central Portal, straight day. J.D. May, plant phone 3-5938, home phone Knoxville 584-0505.

RIDE, or will join car pool from East Village, Alger Road, Oak Ridge, to West Portal, straight day. J.C. Rogers, plant phone 3-5445, home phone Oak Ridge 482-2891.

RIDE wanted from Viking Road, Oak Ridge, to East Portal, straight day. Sarah Coram, plant phone 3-5226, home phone Oak Ridge 483-7534.

CAR POOL MEMBER from Bearden section (via Middlebrook Pike) to Central Portal, straight day. A.P. Brown, plant phone 3-7887, home phone Knoxville 584-1273.

RIDERS from West Haven section, Knoxville (via Solway Road) to any portal, straight day. Larry Bohannon, plant phone 3-5101, home phone Knoxville 524-7189.

RIDER from North Knoxville, vicinity of Whittle Springs Road and Washington Pike or Clinton Highway, straight day, to East, North or Central Portal, J.F. Baker, plant phone 3-5935, home phone Knoxville 523-4542.

RIDE or will join car pool from Sheridan Circle, Oak Ridge, to North Portal, straight day. Calvin Harper, plant phone 3-5315, home phone Oak Ridge 482-3840.

## ORNL

JOIN CAR POOL from 3500 Sutherland Avenue, Knoxville, to East Portal, either shift. Marcia Ellis, plant phone 3-6272.

JOIN CAR POOL from Stockton Drive in West Hills, Knoxville to either portal, 8 a.m. Jack Richardson, plant phone 3-6331 or Knoxville, 584-8279.

RIDERS or car pool members from Chapman Highway or Alcoa Highway to East or North portal at Y-12. Harvey Wyrick, plant phone 3-5961 or Knoxville, 573-1134.

RIDE from Sevierville, Seymour or South Knoxville to any portal, 8 a.m. E.W. Prichard, plant phone 3-6523.

JOIN or form car pool from Broadacres, Powell, to any portal, Frank Bruni, plant phone 3-6415 or Powell, 947-9536.

JOIN car pool from East Village (East Drive) to East Portal, 8:15 a.m. Jerry Klein, plant phone 3-6697 or Oak Ridge 482-1243.

## MAGIC's 1971 index features 500 subjects

The Machining and Gaging Information 1971 Annual Index has been printed and is available to Nuclear Division personnel on a loan basis from Y-12's Central Files, building 9711-5, and the Machining and Gaging Information Center, building 9766.

The 210-page document, compiled by Austin M. Read and Debra L. Simpson, contains a list of over 500 selected references on machining and gaging subjects published in technical journals or presented at national meetings in 1970-71. The document is cross-referenced to provide ease in locating subjects of interest.

A limited number of copies of the index has been provided to other U.S. Atomic Energy Commission installations.

## International papers set

Several ORNL staff members will be presenting papers at international meetings during July.

Herman J. de Nordwall will present an invited lecture "Chemical Problems in HTGR's" at the Hahn-Meitner Institute in Berlin on July 17.

Presenting papers at the conference on Nuclear Structure Study with Neutrons in Budapest, Hungary, July 31-August 5, are John A. Harvey, George A. Satchler, and Cleland Johnson. Harvey's paper, "The Low-Lying Excited States of  $^{145}\text{Nd}$  Populated by the Capture of Thermal Neutrons," was coauthored by D.A. McClure and Subramanian Raman. Satchler's paper is "Optical Model, Including Strength Functions." Johnson's paper is "R-matrix Analysis with a Diffuse Edge Potential for  $^{16}\text{O} + n$  Data."

William J. Peterson and Takashi Makinodan of Biology Division presented invited papers at the Ninth International Congress on Gerontology in Kiev, USSR, July 2-7. Peterson's paper was "Differential Aging in the Capacity of Spleen and Bone Marrow Cells to Induce Graft-versus-host Reactions." Makinodan's paper is "The Immune System -- A Model for the Study of Aging of Precursor Cells in a Differentiating Tissue."

Joseph P. Hammond of Metals and Ceramics Division will present "Heterogeneity of Fusion Welds Determined by Use of  $^{63}\text{Ni}$ -Tagged Filler Metal" at the IAEA-sponsored Symposium on the Use of Nuclear Techniques in the Basic Metal Industries at Helsinki, Finland, July 31-August 4.



RECORDING FOR THE BLIND — Helen Warren, Biology Division, puts in her weekly time as Martha Gerrard, Biology Division, monitors her voice on the tape deck. The two volunteers are among the many who come regularly at the Margaret Despres Weinberg Center of Recording for the Blind, Inc., in Oak Ridge on Badger Road to read, monitor, Braille, or otherwise donate their time to provide recorded textbooks for blind students. Right now the Center needs more volunteers. Anyone wishing to share in this project may do so by calling the RFB number, 482-3496.

## Cascade improvement contract let to increase capabilities

A subcontract has been awarded to a Wisconsin firm to support the Atomic Energy Commission's program of expanding the production capacity of the gas-

eous diffusion plants to meet the growing demand for enriched uranium by the nuclear power industry.

The subcontract, totaling some \$2,600,000 and containing options which, if exercised, will bring the subcontract to approximately \$20,000,000, was awarded to Fairbanks Morse Power Systems Division, Colt Industries Operating Corporation of Beloit, Wis., by Union Carbide. The subcontract was awarded as a result of proposals received by Carbide in response to invitation.

Under the subcontract the company, at its Beloit plant, will perform engineering work and produce components which will be installed in AEC gaseous diffusion plants to increase their capacity to produce enriched uranium used in the production of fuel elements for nuclear power plants. The components produced under the subcontract will be used in plant equipment modifications at all three gaseous diffusion plants, located at Oak Ridge, Paducah, Kentucky, and Portsmouth, Ohio.

The subcontract supports a long-range AEC plan, known as the Cascade Improvement Program (CIP), for upgrading existing gaseous diffusion equipment and facilities utilizing improved technology. To date Congress has made available \$47 million to allow the AEC to proceed with the initial steps of the CIP, the total cost of which is estimated at some \$670 million.

## SAVINGS BONDS

U.S. Savings Bonds make perfect supplements to pension and retirement plans. For that "little extra" cash you need during retirement, bonds purchased now have an added attraction. If you invest \$75 a month for 15 years and 10 months, you save \$22,225! This amount includes \$7,975 you have earned in interest through the years... money that the bonds earned for you, that is.

Ah, summer, what power you have to make us suffer and like it. -- Russell Baker

## Nuclear Division deaths

James C. Maples Sr., Alpha Five Assembly, died July 3, at his Route 20, Ball Camp Pike, home.

A native of Knoxville, he did carpentry work in the Concord area before coming with Union Carbide in 1959. He served in the U.S. Army from 1943 until 1946, winning the Bronze Star during World War II.

Survivors include his wife Mrs. Margaret Calloway Maples, son, James C. Maples Jr., and daughter, Mrs. Bobby Kent. Three brothers, two sisters and two grandchildren also survive.

Funeral services were held at Weaver's Chapel with burial in the National Cemetery.



Mr. Maples

Quentin V. Larson, research associate in Director's Division at ORNL, died June 22 of a heart attack.

Mr. Larson came to ORNL on October 4, 1943 after being associated with George M. Boyd, ORNL senior research advisor, at the University of Chicago. Mr. Larson was a chemist and worked for Boyd in that capacity at the Laboratory. He was a native of Chicago.

Survivors include his wife, Mrs. Eleanor Roen Larson; sons, Eric and George; and daughter, Martha.

Funeral services were held at Weaver's in Knoxville with burial at Oak Ridge Memory Gardens.



Mr. Larson

Henry W. Clear, Y-12's Dispatching Department, died June 29 in a Knoxville hospital from an apparent heart attack.

Mr. Clear was a native of Anderson County and resided at Route 1, Andersonville. He came to Y-12 July 6, 1953.

Survivors include his wife Mrs. Birdie Byers Clear, Knoxville; daughter Henrietta Sawyer, Powell; a son, Randy Clear, Norris; two stepdaughters, two stepsons, one sister and one grandson.

Funeral services were held at Red Hill Baptist Church, and burial followed in the church cemetery.



Mr. Clear



Mr. Reynolds

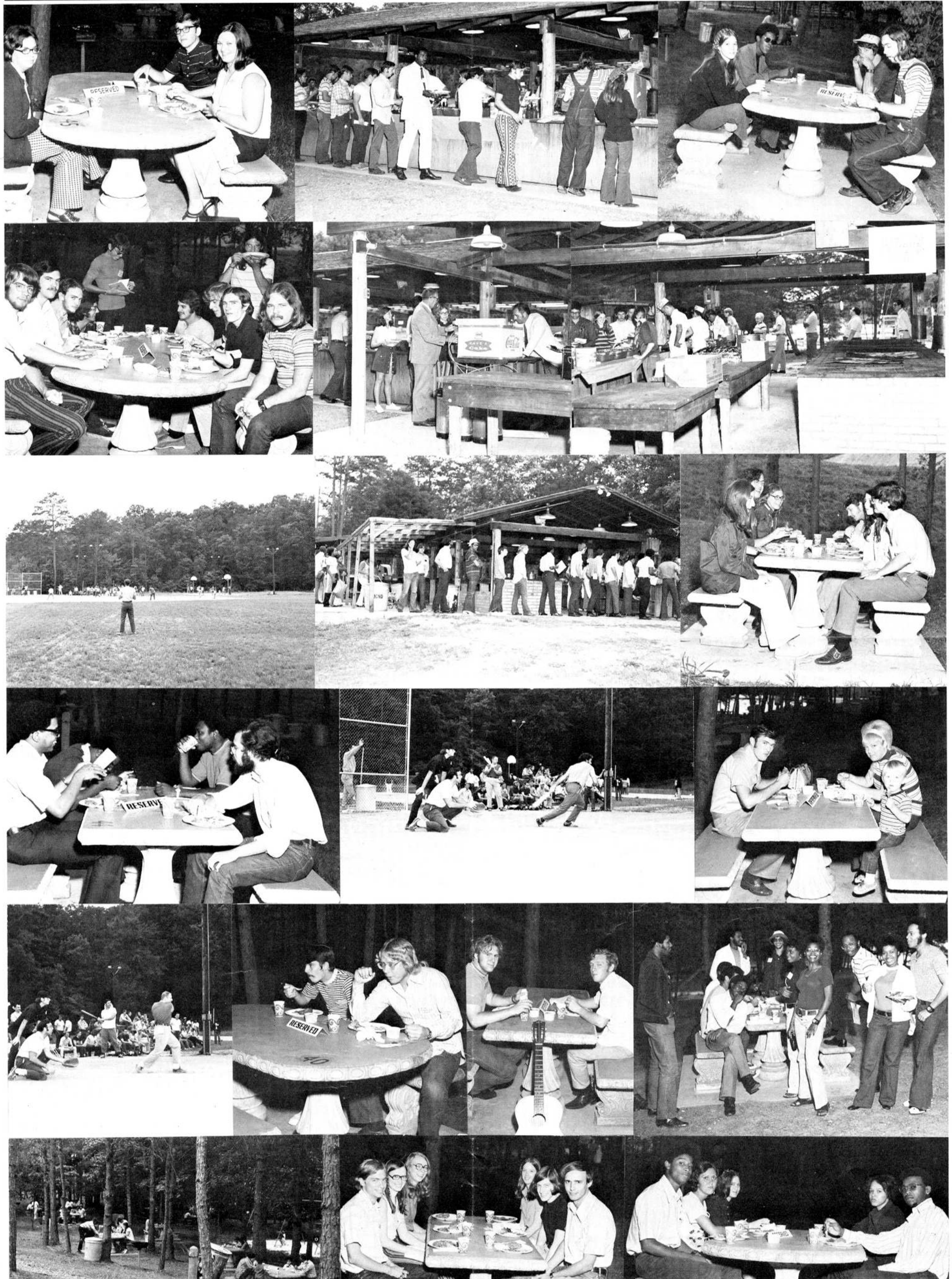
V. Lester Reynolds, a laborer in Plant and Equipment Division at ORNL, died June 26 at Ft. Sander's Hospital in Knoxville.

Mr. Reynolds came to ORNL February 10, 1945. He lived on Route 3 in Lenoir City.

Survivors include his wife, Mrs. Zelma Reynolds; a daughter; Mrs. Dick Kantzer; and two sons, Leonard and Virgil.

Funeral services were held at Click Funeral Home in Lenoir City with burial at Lenoir City Cemetery.





CARBIDE YOUTH PICNIC --- SUMMER OF '72



## Screening test for lung cancer

By T. A. Lincoln, M.D.

Exfoliative cytology is the study of cells shed from the surfaces of various tissues. Its most important use is in the diagnosis of cancer or premalignant degenerative diseases. The study of cells shed from the cervix of the uterus, called the Pap test, is by far the most widely used cytological test for cancer. The cytological study of sputum to help in the diagnosis of a suspected lung cancer is a common practice but the full potential of this test has not been appreciated.

The lung should be the ideal organ for study. Except for the cells which remain



fixed in the framework of the lung, all others find their way in great numbers into the secretions of the lung. They are swept up the bronchial tubes on a mucus escalator and are eventually swallowed. This escalator is a continuous thin blanket of mucus which floats on billions of microscopic hair-like projections called cilia. This cilia beat continuously in one direction, pushing this blanket upward to the throat. This marvelous housekeeping system constantly removes noxious particles which have been inhaled and enables the lung to rid itself of worn-out cells.

### 'False' negative

Cytopathologists, the specialists who interpret the changes in cells, have had mixed feelings about the value of sputum cytology. There has never been any doubt about the value of a positive test. When cancer cells are found, the diagnosis is almost always correct. False positives may occur but when the cytology is performed by an expert, they should be rare. When there is uncertainty, additional specimens can be obtained and several cytologists can examine the slides and compare interpretations.

The problem is the negative test when cancer is present - the false negative. If the cancer is still extremely small, it is possible that no cells were shed at the time the specimen was collected. If the cancer is located in the periphery of the lung, a tiny bronchus may have become obstructed by the tumor, preventing any cells from escaping. If only one or two cancer cells are present among the hundreds of cells stained on a particular slide, it is naturally possible to miss them.

### Improvements noted

One of the reasons why sputum cytology has not yet received widespread application in screening for lung cancer has been the relatively high percentage of false negatives. In many of the early studies, only about half of the cases of proven lung cancer had positive sputum tests. This percentage was increased by doing three separate tests but this, of course, made it more expensive and less practical as a screening test. Many improvements in sputum cytology have been made in the past ten years. Dr. Geno Saccamanno, of St. Mary's Hospital in Grand Junction, Colorado, has developed a simple technique to concentrate cells in the sputum. Previously a direct smear of the sputum had been used and many cancer cells were missed. Dr. Saccamanno now has the patient cough the sputum

into an ethyl alcohol solution, into which a small amount of Union Carbide's Carbowax (polyethylene glycol) has been added. The Carbowax prevents shrinkage of the cells during drying.

Patients who have no cough will produce an adequate specimen if they inhale a fog of saline and propylene glycol for a few minutes.

The specimen is put in an electric blender, mixed for about ten seconds, and then put into a centrifuge tube and centrifuged for five minutes at 1500 rpm. The supernatant liquid is removed and the concentrated cells at the bottom are smeared, dried, and stained on a microscopic slide.

Using the above system, Saccamanno has been able to greatly increase the reliability of sputum cytology. Dr. John Frost of Johns Hopkins and others now use similar techniques and have also greatly increased their effectiveness.

A special classification technique developed by Dr. Saccamanno and others now enables them to identify and classify degenerative cells in the sputum. These cells may precede cancer by many years. These changes, called atypia, have been seen in some cases to gradually change from mild to moderate to marked atypia, and then to cancer. They have also been seen to revert to a less severe form after exposure to cigarette smoke or other pulmonary irritants has been stopped.

Many more studies of healthy smokers and nonsmokers, who have and have not been exposed to pulmonary irritants, are needed. The natural history of these degenerative changes must be better defined. The technique now seems adequately developed, but more cytopathologists and clinicians need to recognize its value.

## Paducah's anglers win cash awards

Gift certificates worth \$500 were awarded to Paducah Plant employees and members of their families who were winners in the recent Spring Fishing Rodeo.

The Rodeo was held during June, with prize gift certificates going to the winners in six categories. A \$20 gift certificate was given to the person catching the largest fish or string of fish in each category.

The categories and the first place winners were:

Black Bass: Largest fish, Dorothy Pottinger (wife of Operator H.J. Pottinger); Largest string, Allen Russell of the Safety Department.

Crappie: Largest fish, Johnny Holland, Maintenance Mechanic; Largest string, Robert Taylor, Machinist.

Blue Gill: Largest fish, Michelle Steinbeck (daughter of E.M. Steinbeck, Electronic Fabrication Shop); Largest string, Charles Fowler, Laundry.

Other game fish: Largest fish, Charles Burdette, Instrument Mechanic; Largest string, B.J. Bond, Operator.

Catfish: Largest fish, James Goodman, Operator; Largest String, James Brown, Electrical trainee.

Rough fish: Largest fish, Jesse Shelbourne, Laboratory; Largest string, H.J. Pottinger, Operator.



*THE WITCHES DANCE* — Allen Bratton, of ORNL, blond hair at center, plays a witch in *Dark of the Moon* currently running at Hunter Hills Theatre in Gatlinburg.

## Young ORNL employee dances away summer on tight schedule

How are you going to spend your summer evenings? A little TV, some yard work, an occasional round of golf, a weekly club meeting, a few days of vacation? Not so for ORNL's Allen Bratton. He'll dance away the summer evenings as a major dancer in *The University of Tennessee's* summer theatre in Gatlinburg.

It's a rigorous schedule, but Allen smiles and says, "I love it and probably will continue as long as I can walk."

In mid-June Allen and his wife Alice, a teacher at Sunnyview Elementary in Knox County, moved to their summer quarters in Gatlinburg. First there was a week of intensive rehearsals and Allen took a week of vacation to be present for them.

### Six nights per week

The show runs six nights a week, Tuesday through Sunday through August. Allen's schedule during this time involves getting up at 5:45 each morning, leaving at 6 to drive some 75 miles to ORNL, arriving with just enough time to grab a cup of coffee before starting work at 8. Allen is in the Audiovisual Section of Instrumentation and Controls Division. Often he is the man in the booth who shows slides and makes recordings during ORNL meetings. His father, Joe Bratton, is in the Graphic Arts Section of Information Division.

At 4:30 he heads for Gatlinburg, arriving just in time to eat a light supper provided for all cast members. Then it's off to make-up and be at the theatre at 7 or shortly thereafter. Performances run from 8:15 to about 10:30 or 11. After make-up removal, the cast gathers for a snack. Then Allen says, "You have to unwind, catch a few hours sleep and start all over. I sleep a lot in off time." Only Monday nights does he have off. Even then, a spot rehearsal may be called.

### 'old' cast members

Allen and Alice have been with the cast since the inception of Hunter Hills Theatre in 1966. In fact they started dating there.

Last summer he danced in *Oklahoma*, played the Conjer Man in *Dark of the Moon* and ran the sound and tapes for *Sound of Music*. This summer he is a major dancer in *Hello Dolly!* and one of the witches in *Dark of the Moon*. His wife is working in publicity this year.

The theatre, given to UT in the mid-sixties, was the old Chucky Jack theatre. UT renovated it and started a summer theatre program in 1966. J. Fred Fields, speech and theatre professor at UT, has always directed the productions. Annedale Guinn is the choreographer.

"We enjoy the theatre," Allen adds, "or we wouldn't do it. It's a lot of traveling and hard work, but we can spend each summer in the mountains."

"The future? I hope to get into choreography and act more -- and keep going every summer as long as we can."

## COMPANY SERVICE —20-25-30—

### ORGDP 25 YEARS

Mary H. Hughes, Walter S. Wendolowski, H.J. Cantrell, Albert S. Sadin, Wade L. Kelly, Theodore W. Bartlett, Vivian S. Watson, Ralph M. Delozier and Marshall B. McCloud.

### 20 YEARS

Donald L. McCammon, Robert W. Browell, Kenneth B. Silva, Richard J. McNamee, Donald R. Kellogg, Marilyn B. Canterbury, Marvin B. Tate, William Felix Nolen Jr., Marcus C. Martin, Carl D. Depth, John M. Baker, Emil C. Fortunato, Kenneth E. Roberson and Bobby L. Johnson Sr.

### Y-12 PLANT 25 YEARS

Rudolph H. Pletz.

### 20 YEARS

Paul E. Clifton, Robert W. Jackson, William L. Adkins, John W. Stair, George E. Beaty, Ernest L. Pemberton and William C. Guettner.

### PADUCAH 20 YEARS

Frederick A. Thomason, Thomas G. Lanham, Augustus J. Legeay Jr., William O. Cherry, Johnnie Thompson, Elza Youngblood, Gilbert N. Henry, John P. Boutwell, Virgil E. Thomas, Rex D. Kluesner, James Johnson and Otis E. Crutchfield.

### ORNL 25 YEARS

Herbert S. Brown, Neva E. Harrison, Harlan S. Caldwell, James C. Long, Lucian R. Koffman.

### 20 YEARS

Kyle E. Sowder, Victor A. DeCarlo, Mearl J. Ailor, Edward C. Brantly, Curtis B. Stokes, William C. Fair, Glenn E. Mills, Norman G. Allmon, Henry N. Elmore, Charles A. Lewis, Anna S. Hobbs.



BULK RATE  
U.S. Postage  
PAID  
Union Carbide  
Corporation

UNION CARBIDE CORPORATION  
NUCLEAR DIVISION  
P. O. BOX Y, OAK RIDGE, TENNESSEE 37830

RETURN REQUESTED  
(Do Not Forward—Return Postage Guaranteed)

## CALENDAR of EVENTS

### TECHNICAL July 18

Bimonthly Information Colloquium: Alvin M. Weinberg will discuss subjects of current interest to the Laboratory staff; Norman Anderson, MAN Program Director, will speak on the subject "Bioengineering -- How Do We Do It?" Jefferson Junior High School Auditorium, 7:30 p.m. (Admission by badge only.)

### July 19

Oak Ridge Summer Lecture Program: "Population Research: Why? How?" Melvin M. Ketchel. Oak Ridge Playhouse, Jackson Square, 7 p.m.

### July 26

Oak Ridge Summer Lecture Program: Panel discussion, "The Anatomy of an Environmental Impact Statement," Roger Cloutier, moderator; Roy E. Thoma, James Curlin, Liane B. Russell, and Peter Cohan, panelists.

### Information colloquium set

The third bi-monthly information colloquium will be held on Tuesday, July 18, at 7:30 p.m. at the new Jefferson Junior High School auditorium on Fairbanks Road in Oak Ridge.

The meeting will begin with Alvin M. Weinberg's discussing various subjects of current interest to the staff on the Laboratory. Following this, Norman Anderson will speak on the subject: "Bio-Engineering -- How Do We Do It?" The meeting will be concluded with a social hour.

In order to encourage open and free discussion between management and staff, the attendance will again be limited to staff only, and hence, admission will be by badge. Come and participate in this program of two-way communication between the staff and management of ORNL.



**DISTINGUISHED SERVICE** — Judith Joan Tyl, a student at the Tennessee School for the Deaf was recently awarded a Distinguished Service Award by Governor Winfield Dunn in the state's "Ability Counts" survey. The contest is sponsored by the Governor and President's Committees on Employment of the Handicapped, the State Department of Education, the Disabled American Veterans, the Tennessee Federation of Business and Professional Women's Clubs, and the Tennessee State Labor Council AFL-CIO. Miss Tyl is the daughter of Y-12er Henry Tyl.

## QUESTION BOX

(Continued From Page 1)

**QUESTION:** WHAT does a family do when the husband retires on the Pension Plan; receives his check the first week of the month for a year and a half; and then all of a sudden, in June, he doesn't get his check? After the second week the husband called the Insurance Office. They called New York, and he was told that he would receive a duplicate check. Two weeks have passed since, and no check! Now, what does a person do?

**ANSWER:** Both the Corporation and the insurance company make every effort to see that your Pension Plan check reaches you on time. Unfortunately, a situation can arise when a check is delayed. You were correct to call your Insurance Office. This gave the office a chance to correct the condition and to let you know when you should receive your check. Since you still did not receive your check, it would have been helpful if you had again contacted the Insurance Office. The office would have been happy to find out what went wrong. If you are still having trouble with your pension check, we advise you to call your Insurance Office. Call "collect" if you live outside of Oak Ridge.

If a Pension Plan check is not received within a few days of the date it is due, retirees are encouraged to notify their Insurance Office or Benefit Plans Office promptly.

**QUESTION:** What does F.I.C.A. stand for? I know it means social security deducted from my check, but just what are the initials for?

**ANSWER:** Good question. Payroll states that F.I.C.A. means Federal Insurance Contributors Act. Like you say, it means social security.

**QUESTION:** Can we advertise items for sale in the Nuclear Division News?

**ANSWER:** Space limitations prohibit personal-type want ads in the pages of Nuclear Division News. With 14,500 plus employees to serve, a classified want-ad section would occupy a great deal of space. The News, does, however, accept ride wanted or car pool type advertisements.

Herman L. Menchhofer, Fabrication Division supervisor in Y-12, died at his lakeside cabin July 3 from an apparent heart attack.



Mr. Menchhofer

Born in Fort Recovery, Ohio, Mr. Menchhofer came with Union Carbide in 1945 after serving with the U.S. Army Air Corps during World War II.

Survivors include his wife Mrs. Nettie Ruth Menchhofer, sons Douglas and Paul, at the 131 Marietta Circle, Oak Ridge, home; also son Robert; and daughters Carolyn Berryman and Ann O'Neill. Two sisters also survive.

Funeral services were held at Weatherford Mortuary with burial in Oak Ridge Memorial Park.

### Next Issue

The next issue will be dated August 3. The deadline is July 26.

## DIVISION Retirees

6-19300

6-19301



Lane

6-19302



Messenger

72-1257



Mrs. Rudder



Waddell

Four Y-12 employees share more than 90 years of company service as they retired July 1.

Leaving were Donald E. Lane, Electrical and Electronics; Vernon O. Messenger, Research Services; Ralph D. Waddell Sr., Central Employment; and Mary H. Rudder, Numerical Control Engineering.

Lane, a native of LaGrange, Ill., came here June 2, 1950. He and his wife Zelma enjoy a lakeside home on Melton Hill Lake.

Messenger, a native of East Moline, Ill., came with Union Carbide May 4, 1946. He and his wife Zelma live in Oliver Springs.

Waddell, widely known in all of Nuclear Division sections, lives at East Tennessee Avenue, Oak Ridge. He graduated from Maryville College, worked with the Tennessee State Employment Service, the War Manpower Board, as well as the U.S. Employment Service, before coming with Union Carbide November 2, 1944.

Mrs. Rudder, nee Mary Henley, is a native of South Harriman. She attended Knoxville Business College and Carson Newman College before coming here January 28, 1957. She and her husband Fred live at 908 Tanforan Drive, Knoxville.

2236-72

2235-72



Gray



Mrs. Taylor

Thomas Gray, a janitor in Operations Division, will retire August 1. He came to ORNL on September 12, 1948. His home is at 227 E. Dillard Avenue in Oak Ridge.

Edith Q. Taylor, a secretary in Metals and Ceramics Division, took early retirement on July 1. She came to ORNL on October 19, 1953. Her home is at 312 E. Broadway in Lenoir City.

## Used equipment sale set

A "Spot Bid" sale of used government-owned vehicles and office equipment will be held at 9 a.m. July 26.

Included in the sale will be typewriters, calculators, adding machines, as well as used vehicles. Inspection may be made at the Government Property Sales Office, off State Route 58, near K-722, ORGDP. Additional information may be obtained from D.R. McCammon, extension 3-4601.